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FEDERAL COMMUNICATIONS COMMISSION  
OFFICE OF THE SECRETARY

**BY HAND DELIVERY**

May 17, 2001

Ms. Magalie Roman Salas  
Office of the Secretary  
Federal Communications Commission  
445 Twelfth Street, S.W.  
Washington, DC 20554

**RE: Ex Parte Presentation, CC Docket No. 94-102** /

Dear Ms. Salas:


On May 16, 2001, VoiceStream Wireless Corporation (Gary Jones and Bob Calaff) met with the Disability Rights Office (Pam Gregory, Sean White, and Jenifer Simpson), the Wireless Telecommunications Bureau (Blaise Scinto, Janet Sievert, Mindy Littell and Patrick Forster), and the Office of Engineering and Technology (Jerry Stanshine) in the above-captioned proceeding.

The purpose of the meeting was to deliver the attached liaison from the Chief Technical Officers of GSM North America to the FCC, describing the technical solution to the issue of E911 TTY availability for the GSM technology. This solution was proposed by the vendors last Thursday, May 10, 2001 and unanimously supported by the GSMNA operators on Friday, May 11, 2001. It represents a means for GSM operators to deliver wireless E911 access, full user-to-user functionality as well as call back capabilities from the PSAP, and will facilitate GSM compliance with FCC rules and policies regarding E911 TTY and Sections 255 and 251 of the Communications Act.

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Pursuant to Section 1.1206 of the Commission's Rules, two copies of this letter have been filed with your office. Please do not hesitate to contact me with any questions.

Sincerely,

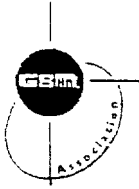
A handwritten signature in black ink that reads "Robert A. Calaff". The signature is written in a cursive, slightly stylized font.

Robert A. Calaff  
Corporate Counsel  
Governmental & Regulatory Affairs

Attachment

cc (w/out attachment):

Tom Sugrue  
Pam Gregory  
Blaise Scinto  
Janet Sievert  
Patrick Forster  
Mindy Littell  
Jenifer Simpson  
Sean White  
Jerry Stanshine



## **GSM North America**

*The North American Interest Group of the GSM Association*

May 11, 2001

Mr. Tom Sugrue  
Chief, Wireless Bureau  
Federal Communications Commission  
Email: tsugrue@fcc.gov

Ms. Pam Gregory  
Disability Rights Office  
Federal Communications Commission  
Email: pgregory@fcc.gov

Re: Liaison on TTY Compliance from the FCC

Dear Mr. Sugrue and Ms. Gregory,

At their most recent meeting last week, the GSM North America (GSMNA) Chief Technical Officers (CTOs) reviewed a liaison received from the FCC, delivered by a representative of Cingular Wireless. The liaison is attached for information.

The liaison expresses the Commission's support for full user-to-user functionality as well as callback capabilities from the PSAP, as part of a wireless carrier's responsibilities under the TTY mandate and Sections 255/251 of the Communications Act. The liaison also expressed the Commission's concern that these capabilities might not be available in the first implementation of wireless TTY access. In addition, the liaison says the Commission... "wishes to deliver a strongly worded opposition to the recent work being done in the GSM standards bodies relating to TTY support."

As you know, standard's work is an iterative process, which continues outside of public meetings and fora. The carrier members of GSMNA have been working with our vendor partners on a continuing basis over the past several weeks to seek a solution for the GSM technology to comply with the TTY mandate and Sections 255/251.

As the attached presentation will indicate, the GSMNA Chief Technical Officers believe such a solution has been developed by all the GSM manufacturers in the last few days, which delivers wireless E911 access to TTY users, full user-to-user functionality as well as call-back capabilities from the PSAP. The solution is applicable to both transcoder-based and server-based solutions and has full interoperability between the two architectures. The member companies of GSMNA unanimously support this solution and are committed to press for early standardization and implementation schedules, in order to meet the timelines laid out in the FCC's TTY mandate.

Finally, the GSMNA member companies wish to assure the FCC of their commitment to provide the best possible services to the disabled community, as demonstrated by our behind the scenes activities over the past two weeks to drive to a solution acceptable and implementable by all.

Best regards,

[signed copy on file]

Robert L. Brown  
Chair GSM North America

Cc: Gary Jones, Chairman – GSMNA Standards Working Group  
Dave Williams, Chair CTO Advisory Group  
Linda Melvin, Director, GSMNA

**Attachments:**

1. FCC liaison delivered to GSMNA by Cingular
2. TTY solution presentation

Meeting Number TWG #25  
Meeting Date May 9-10, 2001  
Meeting Location Calgary, AB Canada

TWG Doc 057-25

Title **LS from FCC, DRO (Disability Rights Office)**  
Source Sean Campbell, Cingular Wireless  
Date May 9, 2001

**Security Classification Category:**

Unrestricted – Industry	X
Unrestricted - Public	

**Information Category**

***Unrestricted***

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**Document History**

Revision	Date	Brief Description
1.0	May 9, 2001	FCC LS through Sean Campbell, Cingular Wireless

**Summary**

LS submitted to the GSM community from the FCC. This LS was generated from a meeting that Cingular Wireless had with the FCC on May 3, 2001.

## 1. Background

The FCC has issued a R&O regarding access to wireless networks for persons using TTY devices. On December 14<sup>th</sup>, 2000, the FCC released a 4<sup>th</sup> R&O which set an implementation schedule for digital wireless systems to accept E-911 calls from TTY devices. The deadline for implementation is June 30, 2002. All hardware and software upgrades must be to operators no later than December 31, 2001.

For a copy of the 4<sup>th</sup> R&O, please visit:

[http://www.fcc.gov/Bureaus/Common\\_Carrier/Orders/2000/fcc00436.txt](http://www.fcc.gov/Bureaus/Common_Carrier/Orders/2000/fcc00436.txt)

The R&O mandating E-911 TTY compliance can be found at:

[http://www.fcc.gov/Bureaus/Common\\_Carrier/Orders](http://www.fcc.gov/Bureaus/Common_Carrier/Orders)

GSM standards for the CTM specifications, the GSM solution to comply with the mandate and R&O, can be found in the following 3GPP standards documentations:

3GPP TR26.226	Cellular Text Telephone Modem Description
3GPP TR26.230	Cellular Text Telephone Modem Transmitter Code
3GPP TR26.231	Cellular Text Telephone Modem Minimum Performance Specifications

Lastly, information can be found at the ATIS website that includes documentation on the TTY mandate, orders and work being performed. ([www.atis.org](http://www.atis.org))

In recent months, there has been much discussion in the GSM community, both Internationally and domestically in the US, on how to implement the CTM solution. This has been discussed at the T1P1.3 meetings in Puerto Vallarta in January 2001 (Transcoder Based implementation was agreed upon) and in the SA2 ad-hoc GTT workshop in Dusseldorf in April 2001. (Service Node Based solution now being seriously considered)

In addition, a LS was sent from T1P1.3 (April 2001) to 3G standards and GSMNA stating that a phased approach (E-911 first, user to user calls later) may be required. It was also stated that the first phase might not support Callback. (Callback is defined as when CLI is presented to the PSAP and the call is dropped, the PSAP should be able to call the user back and still maintain the CTM connection.)

It was also stated within the T1P1.3 meeting (April 2001) and at the SA2 ad-hoc meeting (April 2001) that only E911 was mandated and that is all that is required to offer.

These messages were obtained by the FCC and were not well received. Cingular met with the FCC on Disability Accessibility issues unrelated to the above concerns. The FCC brought up these concerns during this meeting. The FCC was intent on issuing a Public Notice to the GSM community regarding their extreme displeasure with this set of events. They agreed not to issue the statement as long as a LS was sent expressing their concerns.

## **2. Statement from FCC**

The FCC wishes to delivery a strongly worded statement to the GSM community regarding the TTY mandate and Section 255/251. The following are issues currently being considered by the GSM community that are not acceptable from the FCC point of view:

- Any kind of phased approach that does not meet user to user requirements
- Not supporting callback from the PSAP

These issues are addressed in both the TTY Mandate issued by the FCC and/or Section 255/251 requirements from the Telecommunications Act of 1996. GSM implementation of any solution that includes the above options would not be well received and be considered in violation of Section 255/251 and/or the TTY Mandate.

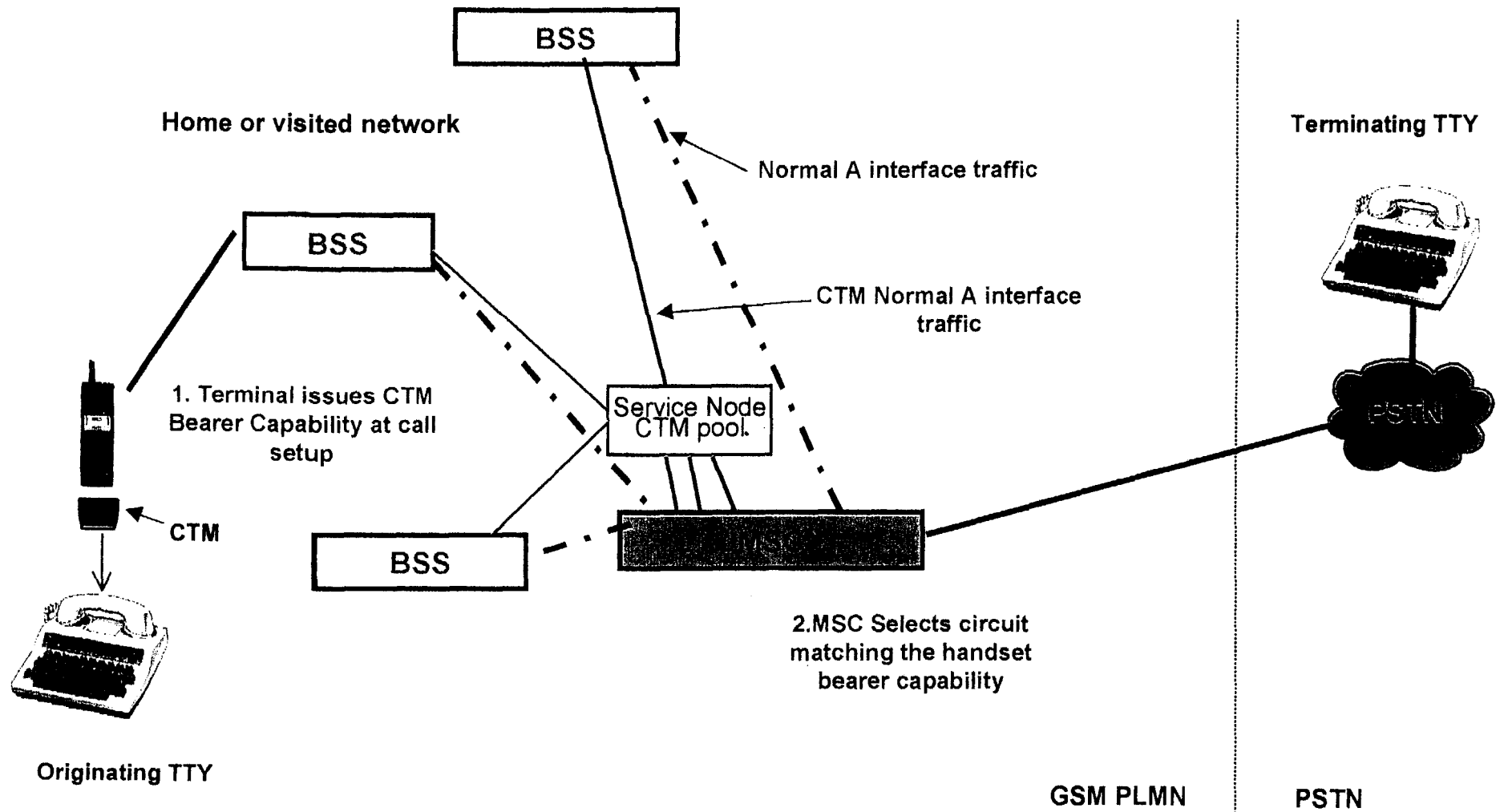
The FCC is also concerned with how the GSM community seems to still be debating the implementation methods of the TTY solution. Going forward, the GSM community will be carefully watched by the FCC to ensure full compliance with all mandates and orders.

Lastly, the FCC stressed it's wishes to deliver a strongly worded opposition to the recent work being done in the GSM standards bodies relating to TTY support.

## **‘CTM Circuit Pool’ Solution**

- A new bearer code is introduced for all CTM mobiles indicating CTM support needed for the call. This allows the network to distinguish between non-CTM terminals and CTM terminals.
- The service node is placed on the A interface / access network, some MSC-BSS circuits are put through service node and the MSC chooses one of these circuits for the call when CTM bearer is received. Majority of MSC-BSS circuits are unaffected. MSC Circuit Pool functionality shall be updated to achieve this.
- Can have 1 service node supporting multiple BSS-MSC A interfaces. E.g. one per MSC site supporting all BSS connected to it.
- (note this is based early analysis on information just recently received)

# CTM Circuit Pool based Solution





## **Service Node in CTM Circuit pool - call setup**

- At call setup the CTM terminal sends a new bit marked in its capabilities, indicating CTM support required. (terminal still says it supports EFR, FR etc. but also a spare bit in this octet is marked for CTM support)
- MSC has some circuits on the A interface marked as CTM supporting. These circuits go via the Service node.
- If MSC detects CTM bit set, it chooses a circuit that goes via Service node.
- This Circuit Identity Code is sent in the Assignment message to BSS along with required channel rate/speech version list as today.
- BSS connects call to the circuit, and the service node is now in the call path and listens for CTM and performs the conversion when needed.

## **‘CTM Circuit Pool’ - Advantages**

- Possible to implement with No impact to TRA, hence no problems with TRA capacity reduction, TRA HW /SW swap, Baudot only, not every call in network effected, heavy maintenance etc. Early analysis shows can be implemented transparent to BSS
- If bearer code made mandatory for CTM mobiles then this solution should be fully compatible with ‘ALL TRA’ solution in relation to roaming etc within US. If one operator is ‘ALL TRA’ solution it simply has CTM available on every circuit connected to the ALL TRA BSS. (no service gaps within US)
- No new node in the core network - almost transparent to core network
- No dimensioning needed specifically for E911 calls. Depending on how standardised in terminal CTM E911 calls can now be safely handled separately from non CTM E911 calls as you now have a terminal/HW specific indicator on if CTM is required. (based on early assumptions on how bearer capability will work)
- Other vendors promoting this approach, (Nortel/Nokia brought this proposal to the 3GPP meeting)

## Interworking between solutions

- If the bearer code is made mandatory for CTM mobiles (Nokia doing the standardization material on this-draft ready yesterday) then from a service point of view, the Circuit Pool solution and the ALL TRA solution would be compatible without service gaps.
  - An ALL TRA network would just have every A interface circuit CTM compatible and the MSC can choose any circuit when it gets the CTM bearer code indication.
  - A CTM Circuit Pool network would just choose the CTM capable A circuit
- Mixture of the Core Network Service Node solution and either of the other 2 solutions can cause some service gaps in some user-user cases.